

IN THE CLAIMS

1-30 (canceled)

31. (currently amended) A method for sputter-induced deposition of metal oxide layers on substrates by means of a reactive sputtering process comprising:

supplying an electrical output to a plasma discharge acting on a sputter target to be deposited by means of at least two electrodes arranged adjacent to one another in a plasma reaction space, wherein said electrical output is selected such that the metal oxide layers to be deposited on the substrate to be coated are deposited at a layer growth rate of ≥ 4 nm/s; wherein the substrate to be coated is arranged during the coating process stationary in relation to a target material to be deposited; wherein the electrodes are connected electrically conductively to the outputs of an alternating current source; wherein the alternating frequency of the alternating voltage for the electrical supply to the plasma discharge is between 10 kHz and 80 kHz; and wherein a transitional area in a hysteresis loop of the p(M) curve between working points with metallic and oxide sputter conditions has a width of less than or equal to 10 sccm, wherein an oxygen sensor provides a probe voltage U_o as an actual value to a control circuit that regulates the sputter reactive sputter process.

32. (currently amended) A method for sputter-induced deposition of metal oxide layers on substrates by means of a reactive sputtering process comprising:

depositing oxide layers on a substrate to be coated by reactive sputtering at a layer growth rate of ≥ 40 nm m/min, wherein said substrate to be coated is moved along in front of a target material to be deposited; wherein electrodes are connected electrically conductively to the outputs of an alternating current source; wherein the alternating frequency of the alternating voltage supplied to the plasma discharge is between 10 kHz and 80 kHz, and wherein a transitional area in a hysteresis loop of the p(M) curve between working points with metallic and oxide sputter conditions has a width less than or equal to 10 sccm, wherein an oxygen sensor provides a probe voltage U_o as an actual value to a control circuit that regulates the sputter reactive sputter process.

33. (canceled))

34. (canceled)